

MAY 30 1972

Docket No. 50-269

R. C. DeYoung, Assistant Director for Pressurized Water Reactors, (revised By
THRU: A. Schwencer, Chief, Pressurized Water Reactors Branch No. 4, ~~Subbranch~~ Licensing

MEETING WITH DUKE POWER COMPANY AND BABCOCK AND WILCOX CONCERNING REVIEW OF
THE OCONEE UNIT 1 REACTOR VESSEL INTERNALS REDESIGN AND REPAIR - MAY 24, 1972

Enclosed is a summary of the meeting held on May 24, 1972 with Duke Power
Company and Babcock and Wilcox. An agenda and attendance list are also
enclosed.

Original Signed by
Irving A. Peltier

I. A. Peltier, Project Leader
Pressurized Water Reactors Branch No. 4
Directorate of Licensing

Enclosures:

1. Meeting Summary
2. Agenda
3. Attendance List

cc w/encls:

- A. Giambusso, L
- R. S. Boyd, L
- D. J. Skowholt, L
- H. R. Denton, L
- R. Tedesco, L
- D. Knuth, L
- CS Branch Chiefs
- PWR Branch Chiefs
- R. W. Klecker, L
- M. Shaw, RDT
- A. Pressesky, RDT
- PWKaras, L
- M. W. Libarkin, ACRS
- W. R. Stratton, ACRS
- Attendees from NEG

POOR ORIGINAL

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OFFICE ▶	L:PWR-4	L:PWR-4				
SURNAME ▶	IAPeltier	ASchwencer				memo
DATE ▶	5/30/72	5/1/72				

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ENCLOSURE NO. 1

DUKE POWER COMPANY - OCONEE NUCLEAR POWER STATION UNIT 1

DOCKET NO. 50-269

SUMMARY OF MEETING - MAY 24, 1972

Summary

A meeting was held at Bethesda, Maryland on May 24, 1972 with Duke Power Company and Babcock & Wilcox. Following the attached agenda, Duke Power and B&W made a detailed presentation on their efforts to determine the cause and to effect a fix to prevent recurrence of the damage suffered by the Oconee Unit 1 Reactor Vessel Internals during hot functional testing.

B&W gave a comprehensive rundown of what efforts are underway in the five areas of damage. Copies of the presentation material (51 pages) have been retained for the docket file and the PWR Branch No. 4 files. In summary it appears that B&W has found potential solutions to the flow induced vibratory stresses believed to have caused the fatigue failures by lowering allowable stress levels, increasing the natural frequency of components and by minimizing the forcing function frequencies. There also will be significant modification to the thermal shield mounting and fixing to constrain motion.

B&W is proposing internals vibration instrumentation (which is still in the conceptual stage) with Safety Guide 20 "Vibration Measurements on Reactor Internals" in mind and is experimenting with systems to detect loose parts during operation. Tapes were played which dramatically detected actual loose parts impacts using a transducer placed on the outside of one of the Oconee 1 steam generators.

Hopefully in the interest of saving time B&W will be in a position to document its redesign and the basis therefore at an early date to permit a timely review by the AEC. The supporting information for the redesign basis would follow at a later date. B&W plans to reassemble Unit 1 by October 1, 1972 and be ready for Hot Functional Testing by November 1, 1972. Oconee 2 would follow about one month later. The only redesign that has not been finalized relates to the possible use of fastening devices at the upper end of the thermal shield. It was left up to Duke and B&W to establish their own schedule for submitting information for our review but they were told that we currently plan to go to the ACRS in November on Units 2 and 3. It goes without saying that the Unit 2/3 review completion depends on resolution of Oconee 1 problems and therefore our schedule for Units 2 and 3 will be in jeopardy if this information is not received soon.

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ENCLOSURE 2

MEETING WITH DUKE AND B&W

OCONEE REACTOR VESSEL AND INTERNALS

MAY 24, 1972

AGENDA

- I. Introduction
- II. Summary of Hot Functional Testing Operations
- III. Summary of Inspections following HFT & Description of Damage
- IV. Results and Conclusions of Failure Evaluations
- V. Redesign Analysis
- VI. Description of Design Changes
 - a. Reactor Vessel Nozzle
 - b. Internals
- VII. Summary and Schedule
- VIII. Backup Investigative Programs
 - a. Hydraulic
 - b. Vibrations
- IX. Plans for HFT Monitoring
 - a. Inside the Reactor Vessel
 - b. Loose Parts Monitoring

ATTENDANCEBABCOCK & WILCOX COMPANY - DUKE POWER COMPANY INTERNALS MEETING

May 24, 1972

<u>NAME</u>	<u>ORGANIZATION</u>	<u>TITLE</u>
G. D. Lindstrom	Babcock & Wilcox	Hydraulics - R&D Division
L. J. Stanek	Babcock & Wilcox	Hydraulics - NPG
P. S. Ayres	Babcock & Wilcox	Section Manager, Metallurgy R&D Division
J. H. MacMillan	Babcock & Wilcox	General Manager Reactor Department
T. J. Kukk	Babcock & Wilcox	Manager, Technical Services
J. H. Taylor	Babcock & Wilcox	Fact Finding Task Force
R. R. Steinke	Babcock & Wilcox	Licensing
D. E. Thoren	Babcock & Wilcox	Component Engineering
A. H. Lazar	Babcock & Wilcox	Component Engineering
E. O. Hooker	Babcock & Wilcox	Unit Manager - Systems Design
R. N. Bottorf	Babcock & Wilcox	Mt. Vernon Engineering Manager
G. E. Kulynych	Babcock & Wilcox	Project Manager - Oconee
G. J. Snyder	Babcock & Wilcox	Component Engineering
W. H. Owen	Duke Power Company	Vice President Design Engineering
J. W. Hampton	Duke Power Company	Assistant Supt. Oconee
D. C. Aabye	Duke Power Company	Project Engineer
K. S. Canady	Duke Power Company	Systems Nuclear Engineer
P. H. Barton	Duke Power Company	Manager Technical and Nuclear Services
S. K. Blackley	Duke Power Company	Principal Mechanical Engineer
W. S. Lee	Duke Power Company	SRVP - Engineering and Construction
J. Ed. Smith	Duke Power Company	Supt. Oconee
W. O. Parker	Duke Power Company	Asst. Manager Steam Production
M. W. Wambsganss	ANL	ACRS Consultant
M. W. Libarkin	ACRS	Staff
W. R. Stratton	ACRS	
D. Lange	AEC/Licensing	Chief, MEB
A. Schwencer	AEC/Licensing	Chief, PWR-4
J. B. Henderson	AEC/RO	RCB
G. W. Reinmuth	AEC/RO	TAB
Frank Jape	AEC/RO	Region II
C. E. Murphy	AEC/RO	Region II
L. L. Buaton	AEC/RO	TAB
D. E. Whitesell	AEC/RO	RCB
A. L. Cunningham	AEC/Licensing	MTEB
R. M. Gustafson	AEC/Licensing	MTEB
U Potapovs	AEC/RO	Region II
W. J. Collins	AEC/RO	TAB
I. A. Peltier	AEC/Licensing	PWR-4 Project Leader
D. K. Davis	AEC/Licensing	PWR-4
H. Faulkner	AEC/Licensing	PWR-4
B. Buckley	AEC/Licensing	PWR-4
Shou-nien Hou	AEC/Licensing	MEB